

AMENDMENTS TO THE DRAWINGS

Replacement sheets 1/12, 2/12/ 8/12 for Figures 1, 2 and 7 respectively are attached -- together with sheets marked to show the changes in sheet numbering.

Attachment: Replacement Sheet(s)
Annotated Sheet Showing Changes

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

The re-numbering of drawing sheets for Figures 1, 2 and 7 has been effected as requested and the specification has been amended as also requested.

Accordingly, all outstanding formal issues are now believed to have been resolved in the applicant's favor.

The rejection of claims 1, 2, 6, 7 and 11 under 35 U.S.C. §103 as allegedly being made "obvious" based on Muller in view of Epps is respectfully traversed -- as is the rejection of claims 3, 4, 5, 8-10 and 12 under 35 U.S.C. §103 as allegedly being made "obvious" based on Muller/Epps in further view of Ambe.

The Examiner is thanked for pointing out a possible confusion between the various Muller references. However, since the Muller patents all appear to describe basically the same architecture, this really should not effect the outcome.

Claims 1, 2, 6 and 7 have been deleted. Claim 3 has been amended to include limitations taken from its base claim (claim 1). Claim 8 has also been amended to include limitations taken from its base claim (claim 6). Claim 11 has been amended to refer to the modification of a provisional port bitmask.

The applicant's invention concerns the close linking of a lookup engine which obtains associated data from an examination of the header of a packet and a separate post processor which acts either on the header or the associated data (depending on the processing function) to modify the associated data. In particular, the associated data includes a provisional port bit mask which in the absence of any other considerations would determine the port or ports from which the packet should be forwarded; the port mask would normally identify a single port for a 'unicast' packet but would identify a plurality of ports if the packet were a multicast or broadcast packet. The post-processor is intended to perform other processing, dependent on the user's requirements and otherwise. For example there may be a security function or a monitoring function. The former may require that the packet be sent to a different selection of ports than is specified in the unmodified bit mask. The latter may require that the packet be sent to a ports additional to the port or ports specified in the unmodified bit mask.

An important advantage of the applicant's invention is that the additional or post-processing may be customized without requiring reprogramming of the main search engine.

The rejection of claims 1,2,6,7 and the previous claim 11 are moot in view of the deletion of those claims.

The Examiner asserts that Muller (US-6128666) shows a lookup engine and a network processor. Although Muller has a lookup engine (Figure 3, item 315) and a so-called 'input packet process' 310 and a 'logic unit 314', included, in the words of Muller (Col 6, lines 4 and 5) to 'forward control information and *also replace predetermined fields of the header* as the header is transmitted out of the input packet processor 310 and into the packet memory 325'.

Muller fails to disclose any network processor which modifies the port bitmask. Such is not disclosed either in the cited passage or elsewhere.

The presently presented claim limitations clearly define a network processor which acts to modify the (provisional) port bitmask. They clearly specify the signaling of such a network processor by the lookup engine and a return signal from the network processor on the completion of a function which modifies the port bitmask. The Examiner has already acknowledged that these features are not shown in either Muller or Epps.

Epps is cited by the Examiner only to show a register for receiving a header portion of a packet. This is conceded, but obviously does not significantly alter the lack of foundation for the rejection as discussed above.

The summary of Examiner's rejection of claims 3 and 8 is that:

Muller and Epps disclose a network switch with a database search engine fore information to modify packet header with associated destination data addresses using input registers.

However, the examiner is reminded that the claims are not directed to modification of a packet header with associated destination data addresses using input registers. A port bitmask is not part of a packet header. It is not a destination address. It is an instruction to a switching engine, not part of a packet. The fundamental basis of the rejection is therefore unsound.

The Examiner relies on Ambe to allegedly show a network processor 'which executes said processing function to cause modification of said port bitmask'. specifically in 'Figure 2, page 5 column 2 paragraphs [0096]-[0099] reference by the fast Filtering processor'.

The Examiner's assertion is without basis in Ambe. Paragraph 0096 of Ambe describes the sending and reception of an ARR (address resolution request) using a MAC address and VLAN ID. Paragraph 0097 describes the outcome of the ARR search as including an 'untagged port bitmap'. Paragraph 0098 refers to modification of the *packet* (not the *bitmap*) in terms of its 802.1q header or the TOS precedence field. These are parts of the packet, not the *bitmap*. Paragraph 0099 again refers to the modification of the *packet* in the buffer slicer.

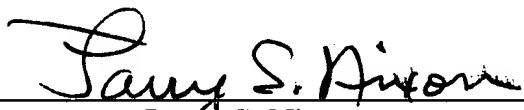
The generation of the port bitmask (port bitmap) is actually described in Ambe paragraph [0234], and is performed by the search engine alone. The (final) port bitmask is obtained by the bitwise OR operation of an L2 bitmap and a L3 bitmap.

In summary there is in no reference or any combination thereof any disclosure of a separate network processor which is linked to the lookup engine in the manner claimed or the modification by such a network processor of a port bitmask.

Accordingly, this entire application is now believed to be in allowable condition and a formal Notice to that effect is respectfully solicited.

Respectfully submitted,

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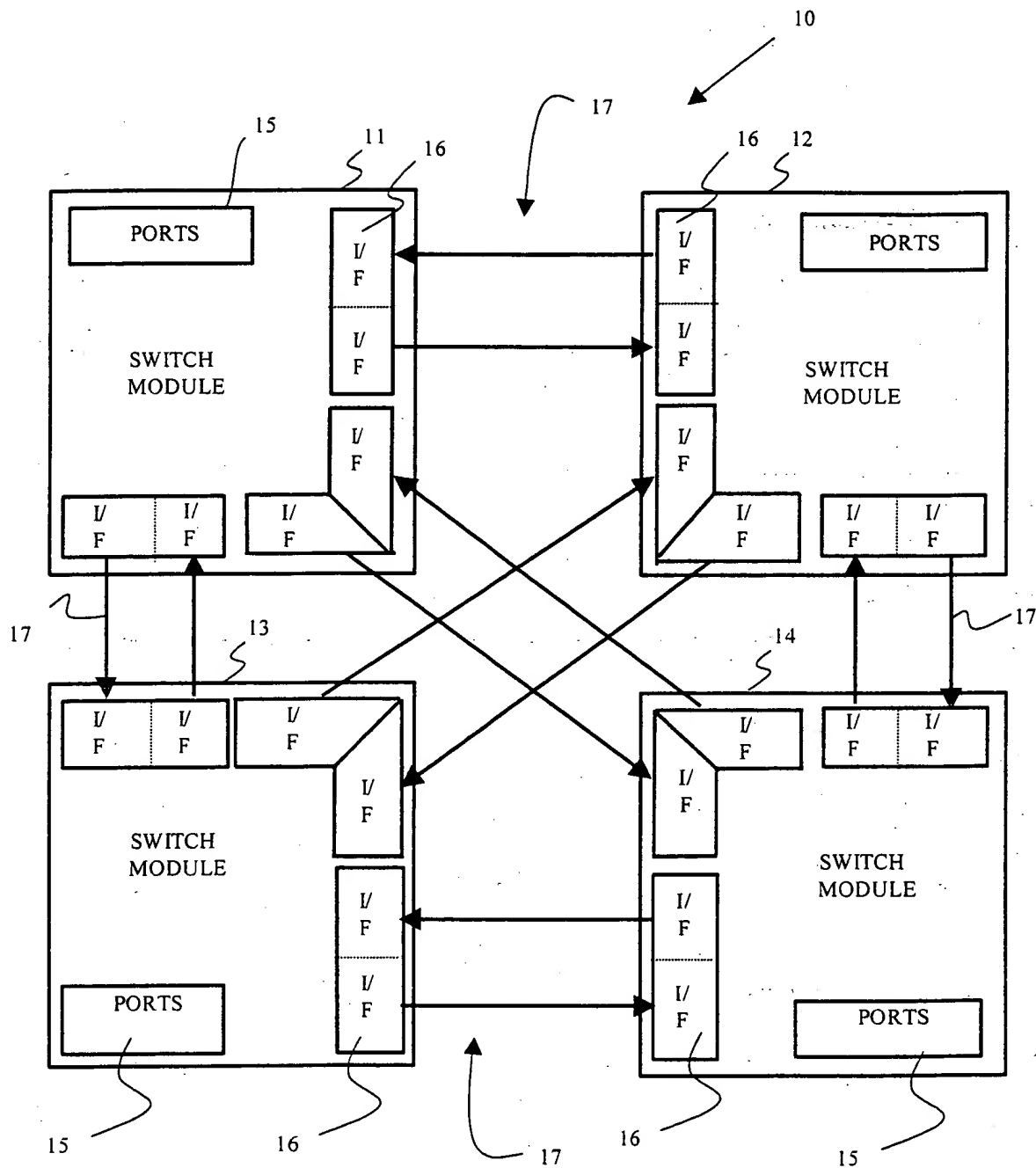


FIG.1

2/10/12

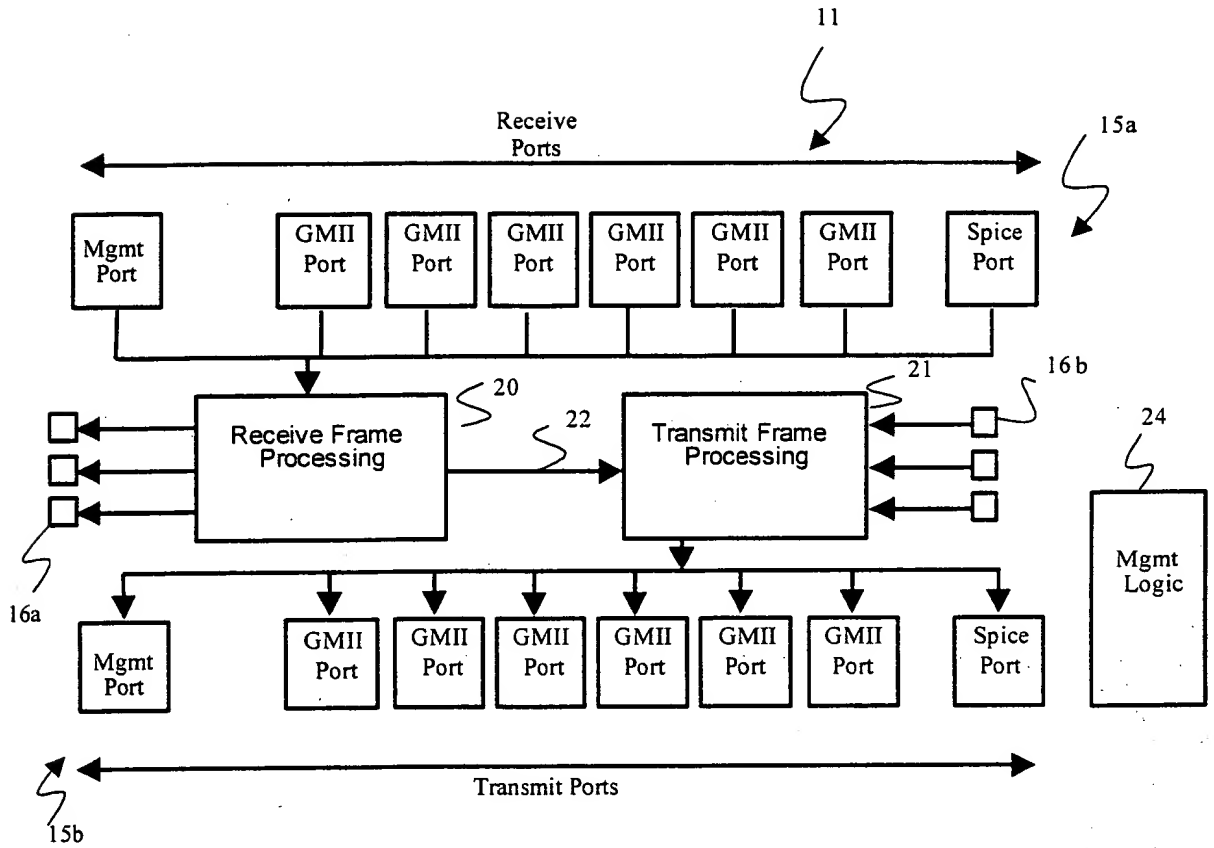


FIG.2

8/12 FOR SN 09/818,670
~~7/10~~

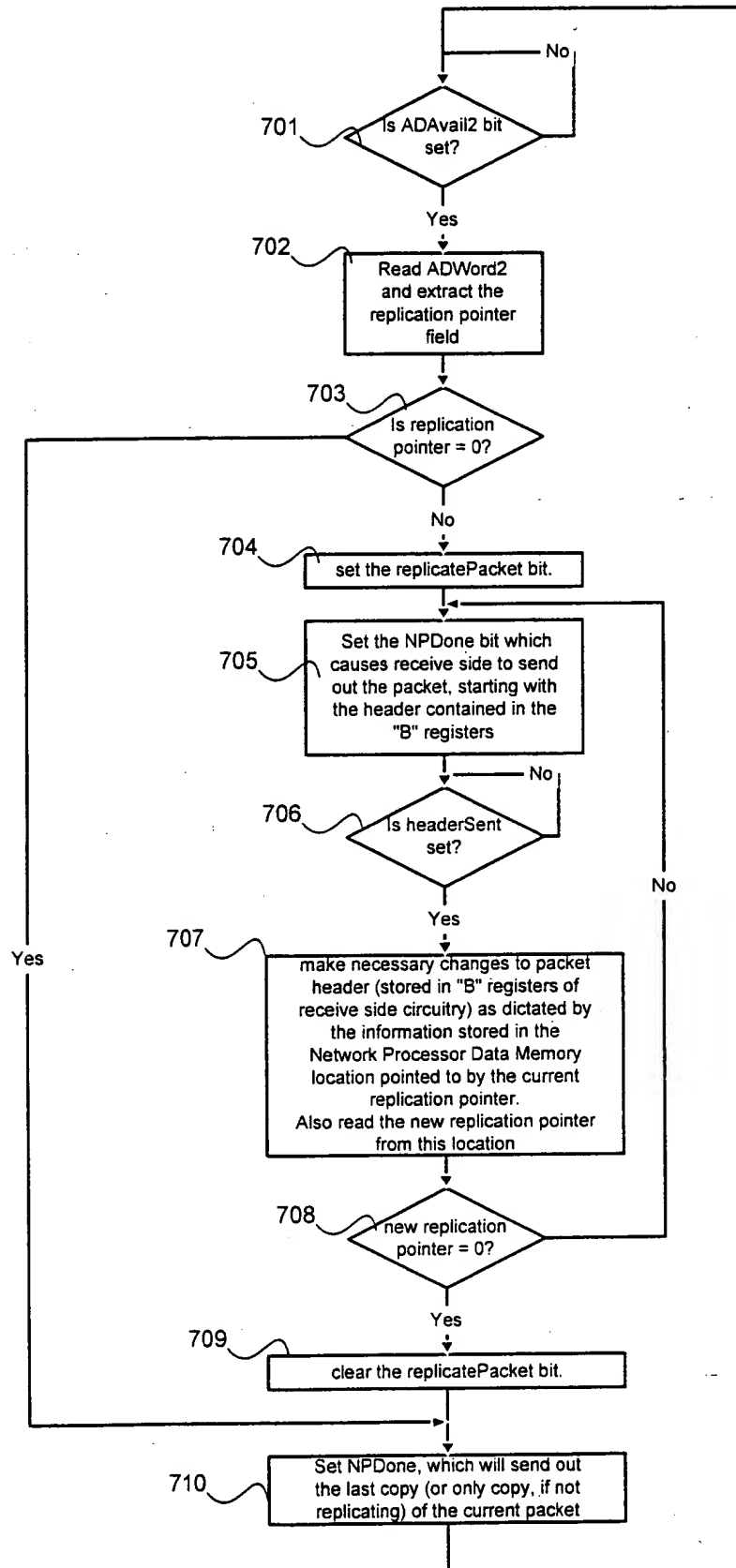


FIG.7